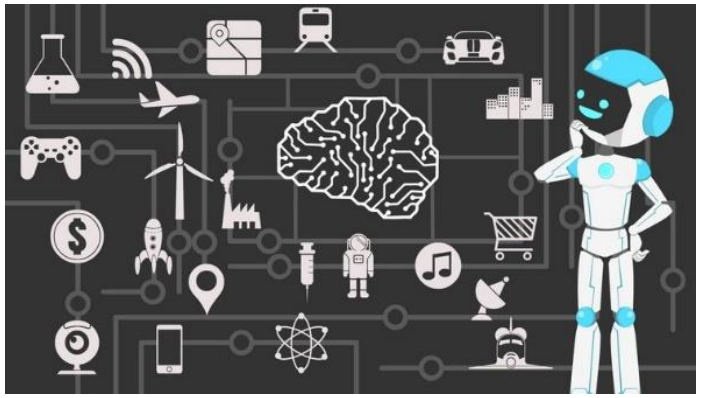


FORMAÇÃO INTELIGÊNCIA ARTIFICIAL E MACHINE LEARNING

CURSO DE R

PACOTES

Packages

- Implementam funções
- Desenvolvidos no mundo inteiro
- Totalmente open source
- Existem mais de 10 mil !!!

Exemplos

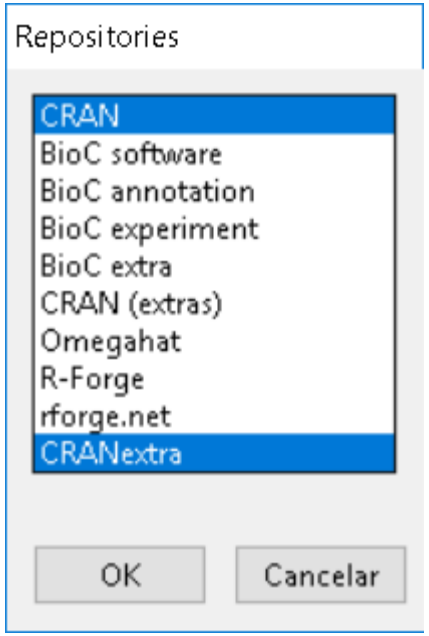
- Machine Learning
- Gráficos
- Series Temporais
- Distribuições de Probabilidade
- Finanças
- Genética
- Etc.

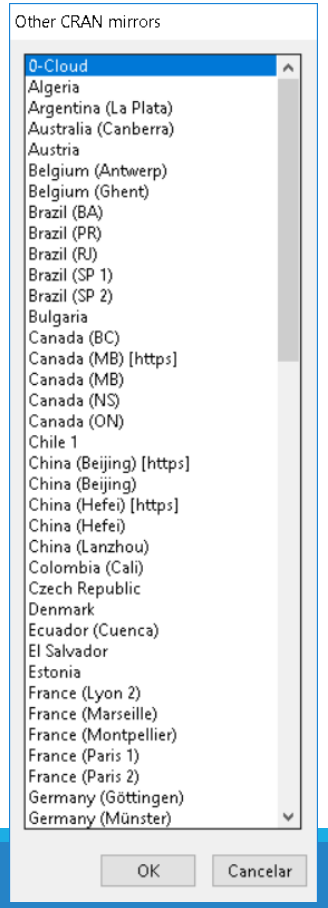
Pacotes populares

- Dplyr: manipulação de dados
- Devtools: desenvolvimento (criação de pacotes)
- Foreign: importar dados de outras ferramentais (SAS, SPSS etc)
- Ggplot2: visualização

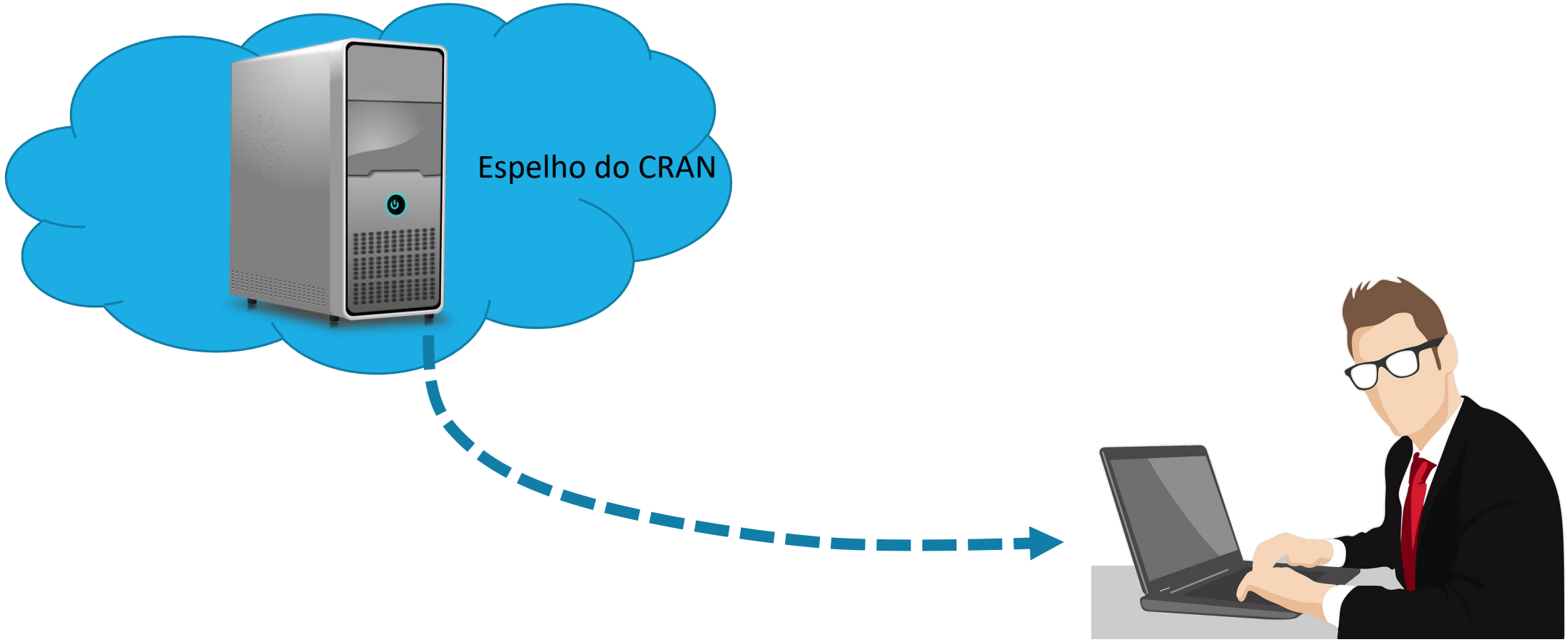
Pacotes

- The Comprehensive R Archive Network: https://cran.r-project.org/
- Repositórios e Espelhos (Mirrors)

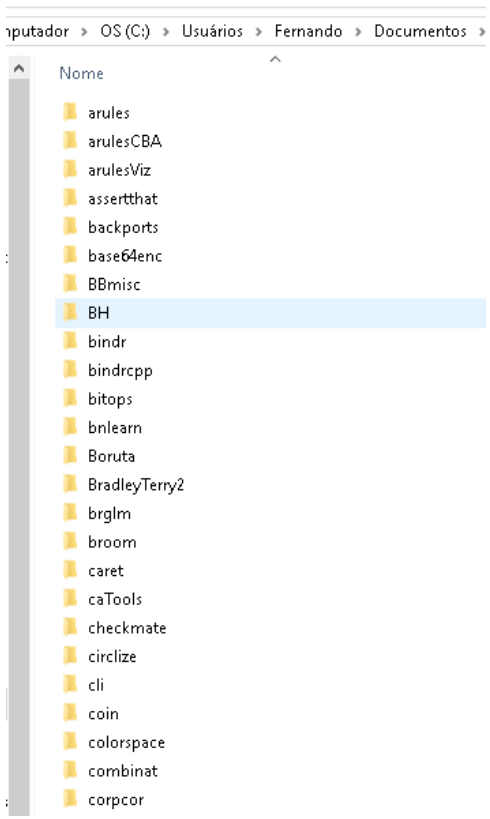


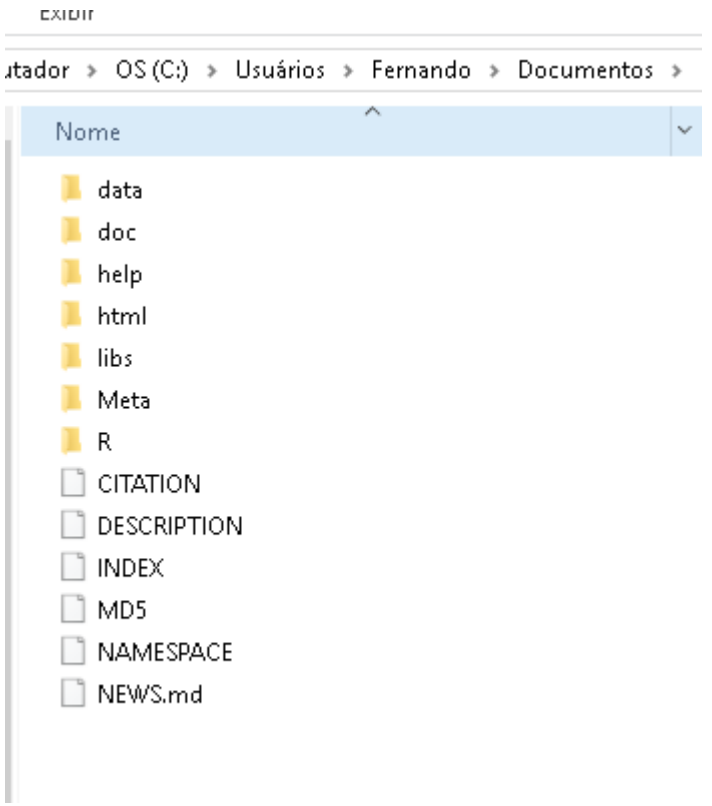


Pacotes



Pacotes





C:\Users\Fernando\Documents\R\win-library\3.4

Instalação

- Linha de comando
- Manualmente

Instalação – Linha de Comando

- Install.packages(“arules”, dependencies=TRUE)

- Seleciona o Espelho do CRAN e aguarda o download
- Verifica a mensagem de instalação ou eventual problema

Instalação Manual: Parte I

- Localiza a página do CRAN do pacote
- Download dos binários conforme SO

arules: Mining Association Rules and Frequent Itemsets

Provides the infrastructure for representing, manipulating and analyzing transaction data and patterns (frequent itemsets and association rules). Also provides C implementations of the association mining algorithms Apriori and Eclat.

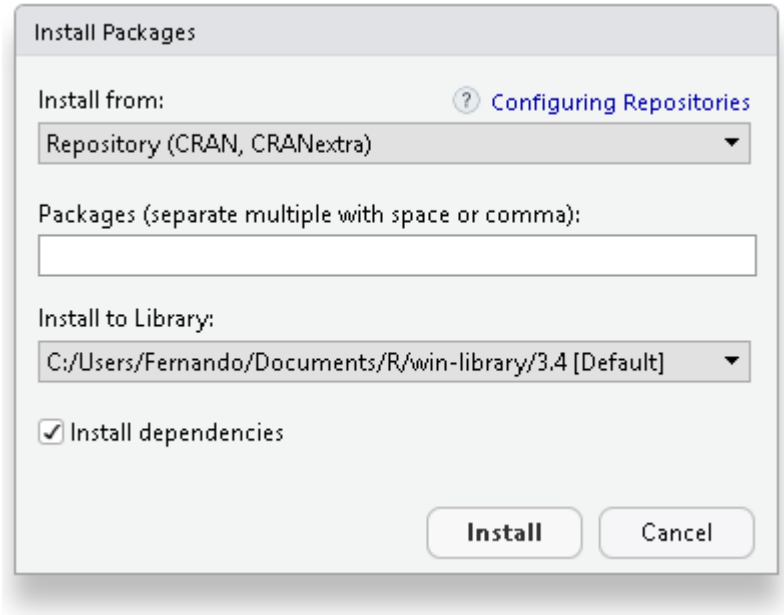
Version:	1.5-5
Depends:	R (≥ 3.4.0), Matrix (≥ 1.2-0)
Imports:	stats, methods, graphics, utils
Suggests:	pmml, XML, arulesViz, testthat
Published:	2018-01-10
Author:	Michael Hahsler [aut, cre, cph], Christian Buchta [aut, cph], Bettina Gruen [aut, cph], Kurt Hornik [aut, cph], Ian Johnson [ctb, cph], Christian Borgelt [ctb, cph]
Maintainer:	Michael Hahsler <mhahsler at lyle.smu.edu>
BugReports:	https://github.com/mhahsler/arules
License:	GPL-3
Copyright:	The code for apriori and eclat in src/rapriori.c was obtained from http://www.borgelt.net/ and is Copyright (C) 1996-2003 Christian Borgelt. All other code is Copyright (C) Michael Hahsler, Christian Buchta, Bettina Gruen and Kurt Hornik.
URL:	https://github.com/mhahsler/arules, http://lyle.smu.edu/IDA/arules
NeedsCompilation:	yes
Classification/ACM:	G.4, H.2.8, I.5.1
Citation:	arules citation info
Materials:	README NEWS
In views:	MachineLearning
CRAN checks:	arules results

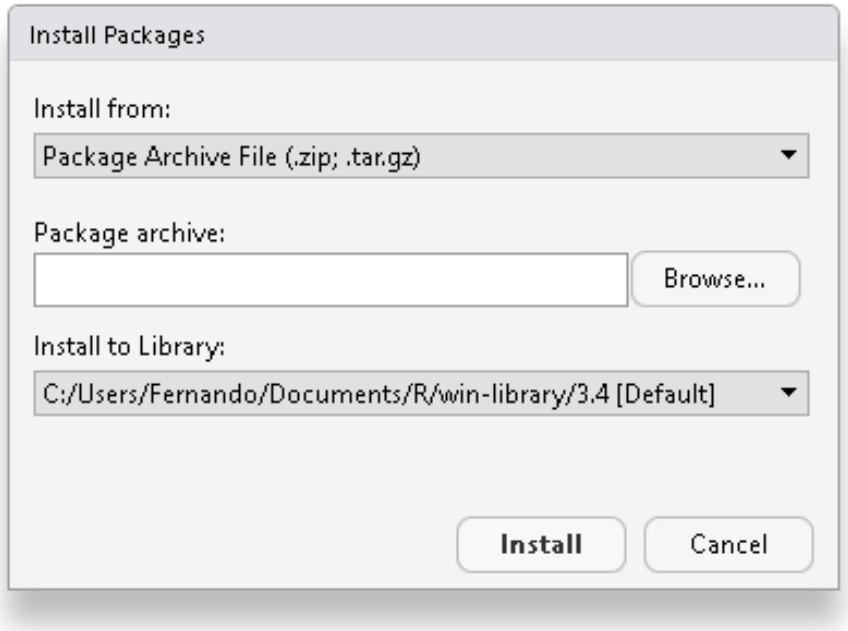
Downloads:

Reference manual:	arules.pdf
Vignettes:	Introduction to arules
Package source:	arules_1.5-5.tar.gz
Windows binaries:	r-devel: arules_1.5-5.zip, r-release: arules_1.5-5.zip, r-oldrel: arules_1.5-4.zip
OS X El Capitan binaries:	r-release: arules_1.5-5.tgz
OS X Mavericks binaries:	r-oldrel: arules_1.5-4.tgz
Old sources:	arules archive

Instalação Manual: Parte II

- RSudio: Acessar menu tools, Install Packages





Carregar e Descarregar Pacote

```
library(arules)
```

```
detach("package:arules", unload=TRUE)
```

CRAN Task Views

- https://cran.r-project.org/web/views/
- Agrupamentos de pacotes e recursos por assuntos

CRAN Task Views

Bayesian	Bayesian Inference
ChemPhys	Chemometrics and Computational Physics
ClinicalTrials	Clinical Trial Design, Monitoring, and Analysis
Cluster	Cluster Analysis & Finite Mixture Models
DifferentialEquations	Differential Equations
Distributions	Probability Distributions
Econometrics	Econometrics
Environmetrics	Analysis of Ecological and Environmental Data
ExperimentalDesign	Design of Experiments (DoE) & Analysis of Experimental Data
ExtremeValue	Extreme Value Analysis
Finance	Empirical Finance
FunctionalData	Functional Data Analysis
Genetics	Statistical Genetics
Graphics	Graphic Displays & Dynamic Graphics & Graphic Devices & Visualization
HighPerformanceComputing	High-Performance and Parallel Computing with R
MachineLearning	Machine Learning & Statistical Learning
MedicalImaging	Medical Image Analysis
MetaAnalysis	Meta-Analysis
Multivariate	Multivariate Statistics
NaturalLanguageProcessing	Natural Language Processing
NumericalMathematics	Numerical Mathematics
OfficialStatistics	Official Statistics & Survey Methodology
Optimization	Optimization and Mathematical Programming
Pharmacokinetics	Analysis of Pharmacokinetic Data
Phylogenetics	Phylogenetics, Especially Comparative Methods
Psychometrics	Psychometric Models and Methods
ReproducibleResearch	Reproducible Research
Robust	Robust Statistical Methods
SocialSciences	Statistics for the Social Sciences
Spatial	Analysis of Spatial Data